ORDER FOR SUPPLIES AND SERVICES

IMPORTANT: See instructions in GSAR 553.370-300-1 for distribution

1. DATE OF ORDER	2. ORDER NUMBER	3. CONTRACT NUMBER	4. ACT NUMBER
07/31/2019	47QFRA19F0022	GS-10F-0173T	A21624928

FOR GOVERNMENT USE ONLY

5. ACCOUNTING CLASSIFICATION				6. FINANCE DIVISION		
FUND 285F	ORG CODE Q08FA000	B/A CODE AA20	O/C CODE 25	AC	SS	VENDOR NAME
FUNC CODE AF151	C/E CODE H08	PROJ./PROS. NO.	CC-A	MDL	FI	G/L DEBT
W/ITEM	CC-B	PRT./CRFT		AI	LC	DISCOUNT

7. TO: CONTRACTOR *(Name, address and zip code)*
KIHOMAC Contracting
KIHOMAC, INC.
2100 RESTON PKWY STE 310
RESTON, VA 201911256
United States
(b) (6)

8. TYPE OF ORDER
B. DELIVERY

REFERENCE YOUR

Please furnish the following on the terms specified on both sides of the order and the attached sheets, if any, including delivery as indicated.

This delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above numbered contract.

C. MODIFICATION NO.
000
TYPE OF MODIFICATION:

AUTHORITY FOR ISSUING

9A. EMPLOYER'S IDENTIFICATION NUMBER
(b) (6)

9B. CHECK, IF APPROP WITHHOLD 20%

Except as provided herein, all terms and conditions of the original order, as heretofore modified, remain unchanged.

10A. CLASSIFICATION
A5. Veteran Owned Business

10B. TYPE OF BUSINESS ORGANIZATION
C. Corporation

11. ISSUING OFFICE *(Address, zip code, and telephone no.)*
GSA Region 08
Brandy J Massingale
PO Box 25526
Denver, CO 80225
United States
(303) 236-7150

12. REMITTANCE ADDRESS *(MANDATORY)*
KIHOMAC, INC.
5085 Twin Brook Run Dr
Fairfax, VA 22032-2541
United States

13. SHIP TO*(Consignee address, zip code and telephone no.)*
Christopher Summers
7879 Wardliegh Rd
Hill AFB, UT 84056
United States
(801) 777-1234

14. PLACE OF INSPECTION AND ACCEPTANCE
Christopher Summers
7879 Wardliegh Rd
Hill AFB, UT 84056
United States

15. REQUISITION OFFICE *(Name, symbol and telephone no.)*
Diana E Zoppi
GSA Region 08
W 6TH AVE AND KIPLING ST
LAKEWOOD, CO 80225-0546
United States
(b) (6)

16. F.O.B. POINT	17. GOVERNMENT B/L NO.	18. DELIVERY F.O.B. POINT ON OR BEFORE	19. PAYMENT/DISCOUNT TERMS
Destination		07/30/2020	NET 30 DAYS / 0.00 % 0 DAYS / 0.00 % 0 DAYS

20. SCHEDULE

See Attachment 2 - (b) (4)

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
(b) (4)					

21. RECEIVING OFFICE *(Name, symbol and telephone no.)*		TOTAL From 300-A(s)	
OO-ALC Hill AFB, (801) 777-1234			
22. SHIPPING POINT	23. GROSS SHIP WT.	GRAND TOTAL	(b) (4)
Specified in QUOTE			

PERFORMANCE WORK STATEMENT (PWS)

FOR

SECOND GIGABIT ETHERNET SWITCH (2GES)

Original 14 February 2019

Updated 16 August 2021

Table 1: PWS Change Log

Change Mod	Paragraph	Short Description of Change
Mod 001		No impact on PWS Admin change to add clause to contract
Mod 002		No impact on PWS Admin change to add clause to contract
Mod 003	1.2.8	Added paragraph to define OFP baseline to suite 10
Mod 003	1.2.9	Added to capture LHCBP and NMRB requirement
Mod 003	3.3.5.2.2	Separate TCTOs shall be written to cover aircraft, LHCBP, NMRB and Pylon station 2 and 10 TCTOs [CDRL A028]
Mod 003	1.2.10	Added Ethernet cable 10GB requirement
Mod 003	1.2.11	Added Pylon station 2 and 10 modification with 10GB requirement
Mod 003	3.3.4.3	Deleted Integration Analysis and CDRL A017 kept paragraph but deleted requirement to maintain numbering.
Mod 003	3.3.5.2.3	Deleted CDRL A030: The contractor shall document and maintain configuration control for any hardware or software form, fit, function, or interface that is affected by system modifications [CDRL A030]
Mod 003	3.3.6.3	Deleted reference to CDRL A039
Mod 003	3.3.6.3	Deleted reference to CDRL A040
Mod 003	3.3.4.2	Deleted paragraph requirements, CDRL A015 and CDRL A016.
Mod 003	CONTRACT DATA REQUIREMENTS LIST (CDRL)	Updated to reflect CDRL A015, CDRL A016, CDRL A017, CDRL A030, CDRL A039 and CDRL A040 are all Reserved
Mod 003	CONTRACT DATA REQUIREMENTS LIST (CDRL)	Added CDRL A050 SSS and CDRL A051 ICD
Mod 003	3.3.2.1	Added paragraph referencing SSS and CDRL A050
Mod 003	3.3.4.8	Added paragraph referencing ICD and CDRL A051
Mod 004	1.2.12	Added LHCBP CB2 re-label from VGH RCDR to CHRGR PWR
Mod 004	1.2.1.3	Added VGH wire, other wire, and LRU removal requirement
Mod 004	Appendix A	Added Appendix A to provide detailed list of VGH wire, other wire, and LRU removal requirement
Mod 005	3.3.5.4	Added vibration specification requirements to perform Zone 2 testing instead of Zone 3
Mod 006		No impact on PWS Admin change to add clause to contract
Mod P00007	3.3.5.4	Reverted paragraph back to original wording from contract award, the vibration specification should have stayed as Zone 2
Mod P00007	1.2.6	Adjusted wording for ordering kits
Mod P00007	1.2.6.1	Option to purchase EWA Kits
Mod P00007	1.2.7	Added clarification to capture commodity install pricing clarification; Number of ARC fleet and active duty fleet removed.
Mod P00007	3.4	Deleted aircraft table and replaced with new table in new sections 3.4.1, 3.4.2, 3.4.3 and 3.4.4; Reference to Depot Speed Line removed.
Mod P00007	3.4.1	Added table detailing the 5 installs during the integration phase.
Mod P00007	3.4.2	Added table detailing remaining test aircraft requiring installation pricing
Mod P00007	3.4.3	Added table detailing ARC and ACC aircraft installations
Mod P00007	2.2	Added DoDI 5200.48 Controlled Unclassified Information (CUI)
Mod P00007	3.4.2.1	79-0177 updated – Received TCTO 568

1.0 SCOPE

1.1 TITLE: A-10C Second Gigabit Ethernet System (2GES) Design and Integration Effort

1.2 TASK DESCRIPTION
Analyze, optimize and integrate a 2GES and associated Ethernet wiring on A-10C aircraft using existing GES equipment as identified in para. 2.3; contractor will be required to purchase equipment in para 2.3 with funding provided by the Government.

The contractor shall:
1.2.1 Meet requirements listed in this PWS
1.2.2 Provide integration design (Hardware/Wiring/Drawings/Modeling)
1.2.3 Provide test support including installation support on test aircraft
1.2.4 Provide TO source data and installation TCTO
1.2.5 Certify 2GES Air Worthiness/Cyber Security
1.2.6 Purchase hardware and build Kits in separate orders, first order of 154 complete kits (CLIN 0005- 6/2020). The second order ceiling of 154 complete kits to be purchases in lots, the first lot size of 86 kits, and each additional lot increments of 10 kits. Kits can be mixed purchase of legacy wing or enhanced wing assembly as defined when ordered.
1.2.6.1 Option EWA kit purchase: Purchase up to 100 EWA kits in lots of 10 with a two year period of performance.
1.2.6.2 Option EWA kit purchase: Purchase up to 100 fuselage kits in lots of 10 with a two year period of performance
1.2.7 Optional task: Install 2GES into the A-10C ARC fleet, with an additional option to install into the active duty A-10 C fleet. These would be completed via a Contractor Field Team (CFT). Pricing should cover aircraft installation with commodity modifications and an alternate price to install the aircraft modification only, commodity modifications will be performed by the unit. All structural work such as sheet metal will be performed by the host unit.
1.2.8 The 2GES system shall use Suite 10 as the baseline Operational Flight Program.
1.2.9 The 2GES system shall use power supplied by the Left Hand Circuit Breaker Panel (LHCBP) and switched through the Nav-Mode Relay Box (NMRB).
1.2.10 The 2GES system shall use Gore manufactured Ethernet cable, part number RCN9034-24 that meets airworthiness certification and communication rate of 10 gigabytes.
1.2.11 The 2GES system shall be installed within pylon station 2 and station 10 using Gore manufactured Ethernet cable, part number RCN9034-24.
1.2.12 The 2GES system shall re-label the LHCBP, Circuit Break 2 (CB2) from VGH RCDR to CHRGR PWR.
1.2.13 The 2GES system shall remove unused Velocity, Gravity and Height (VGH) recorder wiring, other obsolete wires, and associated Line Replaceable Units (LRU)s as identified in Appendix A.

1.3 PURPOSE: An additional GES shall be added to expand the current Ethernet system which may require several unused wire runs to be removed with government approval. Gigabit Ethernet wiring shall also be extended to wing stations 1, 2, 10, and 11 to allow future Electronic Warfare growth capabilities inherent to upgraded Electronic Attack (EA) pods and advanced targeting pods (ATP).

1.3.1 The 2GES Integration and System Testing will be vendor led, government supported and all planned events need to have travel and labor costs priced as part of the overall proposal.

1.3.2 The vendor will not be charged for the government furnished equipment needed to conduct the integration or system testing that is required to test if the 2GES is functioning with the aircraft baseline architecture and Operational Flight Program (OFP) software. Funding for Government Furnished Equipment (GFE) assets referenced in section 2.3 shall be provided by the government but assets shall be procured by the vendor. The vendor will also not be charged for the labor hours of support provided to plan, execute and assist in documenting these tests. The contractor will cost all travel, labor and any unique hardware or test equipment necessary to support these test events. Events will be coordinated with appropriate government personnel no later than 45 days prior to the intended test event in order for the government to schedule test resources.

2.0 GOVERNMENT FURNISHED

2.1 REFERENCED DOCUMENTS

Document No.	**Date**	**Title**
AFI 63-131_AFMCSUP_I	4-Dec-13	Modification Management
EIA-632		Processes for Engineering a System
EIA-649-1	4-Mar-15	Configuration Management Requirements for Defense Contracts
MIL-HDBK-516C	12-Dec-14	Airworthiness Certification Criteria
MIL-HDBK-61A	7-Feb-01	Configuration Management Guidance
MIL-HDBK-704A	9-Apr-04	Guidance For Test Procedures For Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics 28 VDC
MIL-STD-130N(1)	16-Nov-12	Identification Marking of US Property
MIL-STD-461G	11-Dec-15	Requirements for the Control of Electromagnetic Interface Characteristics of Subsystems and Equipment
MIL-STD-704A	9-Aug-66	Aircraft Electric Power Characteristics
MIL-STD-810G	15-Apr-14	Environmental Engineering Considerations and Laboratory Tests
MIL-STD-882E	11-May-12	System Safety
SARHN0537, Rev B	1-Aug-14	Safety Assessment Report
TM-8601P	9-Dec-14	AF Technical Manual Contract Requirements (TMCR)
TR832HN0533, Rev A	29-Jan-14	Failure Mode, Effects & Criticality Analysis (FMECA) Report
TR832HN0535	18-Mar-11	Structural Update
TR932HN0536, Rev A	24-Jan-14	Weight and Balance Update
TR932HN0545	4-Nov-15	Failure Mode Effect Testing (FMET) Report

2.2 NON REFERENCED APPLICABLE DOCUMENTS

Document No.	Date	Title
SA220R0307	30-Apr-96	A-10A Shock, Vibration and Acoustics Qualification Procedures for Aircraft Equipment
AFI 31-601_AFMCSUP_I	21-Jul-15	Industrial Security Program Management
AFMCI 63-1201	28-Mar-17	Implementing Operational Safety Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)
AFPAM 63-113	17-Oct-13	Program Protection Planning for Life Cycle Management
DoDI 5000.02	7-Jan-15	Operation of the Defense Acquisition System
DoDI 5200.39	28-Dec-10	Critical Program Information (CPI) Protection Within the DOD
GEIA-STD-0005-1A	1-Mar-12	Performance Standard for Aerospace and High Performance Electronic Systems Containing Lead-free Solder
MIL-HDBK-2164A	19-Jun-96	Environmental Stress Screening Process for Electronic Equipment
MIL-HDBK-217F	28-Feb-95	Reliability Prediction of Electronic Equipment
MIL-STD-1472G	11-Jan-12	Human Engineering
MIL-STD-31000A	26-Feb-13	Technical Data Packages
MIL-STD-686C	26-Oct-01	Cable and Cord, Electrical; Identification Marking and color coding of
SAE-GEIA-859	24-Nov-14	Data Management
DoDI 5200.48	6-Mar-20	Controlled Unclassified Information (CUI)

2.3 GOVERNMENT FURNISHED EQUIPMENT
The following provides 10 sets 2GES for the PWS effort:
2 Integration Sets
3 D/OT&E Install Sets
2 Environmental Test Sets
3 Spares

Description	Qty.	Part Number	NSN	Date Available
Second Gigabit Ethernet Switch	10	AE101264-004	7025-01-657-3614WF	30 Days ARO Award

2.4 GOVERNMENT FURNISHED INFORMATION

Description	Date	Date Available
Aircraft Power Electric Loads Analysis	Latest	Upon Request
Aircraft Technical Orders	Latest	Upon Request
Other Drawings/Schematics/Models	Latest	Upon Request
IP Address Assignments	Latest	30 Days ARO

2.5 GOVERNMENT FURNISHED PROPERTY/ACCESS

Facility/Access	Date Available
(b) (5)	

3.0 REQUIREMENTS

3.1 GENERAL REQUIREMENTS

3.1.1 Travel
The contractor is required to travel to accomplish this requirement. Negotiated travel is considered acceptable upon delivery order award. Additional/changed travel requiring an increase in delivery order funding shall be forwarded to the ACO for processing a delivery order modification prior to travel. If an increase in delivery order funding is not required, the contractor shall notify the ACO, in writing, of additional/changed travel. Additional/changed travel shall be briefed at Program Management Reviews (PMRs).

3.1.2 Notification of Rights

3.1.2.1 Unlimited Government Rights
The Government shall have unlimited rights to items, components, systems, processes, computer software and technical data developed, or previously developed if it is delivered as a part of this contract, by the prime contractor or its subcontractors. Software procured by the prime contractor shall have the licensing agreement(s) passed through to the Government. Unless as specified by Section "3.1.2.2. Other than Unlimited Government Rights Items" all such documents/software shall be marked "unlimited rights" as follows:

UNLIMITED RIGHTS
Contract No.
Contractor Name
Contractor Address
The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are unlimited. No restrictions apply.

3.1.2.2 Other than Unlimited Government Rights Items
The prime contractor shall identify and receive written Government approval from the ACO prior to committing to the use of commercially procured or contractor developed items, components, processes, computer software, or technical data which they:

- Intend to deliver with Limited Rights
- Intend to deliver with Government Purpose License Rights
- Intend to deliver with Restricted Rights
- Have not yet determined if such rights should apply

Data being delivered with less than unlimited rights shall be marked in accordance with the DFARS 252.227-7013(f) and DFARS 252.227-7014(f).

3.1.3 Disposition of Excess Material and Contractor-Acquired Property (CAP)
The contractor shall deliver a list of all CAP [CDRL A001] items. The contractor shall identify and receive written disposition instructions from the Administrative Contracting Officer (ACO) for all excess material and CAP.

3.2 PROGRAM MANAGEMENT
The contractor shall perform administrative, technical, financial management, and eCMRA reporting [CDRL A003] functions during the course of this effort and shall maintain a status of their effort towards achieving the objectives, including all technical activities and efforts, problems/deficiencies, impacts, and recommended solutions. It shall provide a forecast of work to be accomplished during the upcoming month. This report shall include status and progress towards open milestones that are active, or scheduled to become active, according to the delivery schedule. The prime contractor shall identify actions being taken to correct schedule deficiencies. Changes from previous reports shall be highlighted and explained. Approved IMP and/or IMS updates shall be reflected in this report. The contractor shall report any situation requiring immediate action by the Government using the most expedient means (teleconference, e-mail, or letter) and document the situation in the Monthly Status Report.

3.2.1 Single Manager
The prime contractor shall establish a single point of contact for the overall management effort.

3.2.2 Subcontractor Management
The prime contractor may subcontract with other companies to establish a strong technical capability to meet diverse contract requirements. The prime contractor shall be responsible for all aspects of contract performance, oversight, and the flowing of requirements to all subcontractors.

3.2.3 Meetings

3.2.3.1 IPT Meetings
The contractor shall conduct separate weekly IPT meetings for program management and engineering. The prime contractor shall provide Minutes [CDRL A004] after each meeting within 5 days.

3.2.3.2 Technical Interchange Meetings (TIMs)
The contractor shall conduct TIMs as necessary in the performance of this task at a mutually agreed upon location. The content of the meeting can include the discussion of any information that has impact upon the task activities, including documentation contents or format.

3.2.3.2.1 The TIM shall not replace the PMR process. The prime contractor shall prepare an Agenda [CDRL A005] for each TIM. The Program Manger shall be consulted during development of the TIM agenda to ensure Government items are addressed. The prime contractor shall provide presentation materials no later than 48 hours prior to the TIM. The prime contractor shall provide Minutes [CDRL A004] after each TIM within 5 days.

3.2.3.3 Program Management Reviews
PMRs shall alternate between Government and contractor facilities unless otherwise approved by the ACO. PMRs shall be reflected in the IMS [CDRL A006], detailed in the IMP [CDRL 07], and updated in the Monthly Status Reports [CDRL A003]. PMRs shall be scheduled semiannually. The prime contractor, with concurrence from the Government, may schedule PMRs more or less frequently as tasks warrant. The prime contractor shall prepare an Agenda [CDRL A005] for each PMR. The prime contractor shall consult the Program Manager during development of the PMR agenda to ensure Government concerns are addressed. The prime contractor shall provide presentation materials no later than 48 hours prior to the PMR. The prime contractor shall provide the Minutes [CDRL A004] after each PMR within 5 days.

3.2.3.4 Kick-Off Meeting
The prime contractor shall hold a Kick-Off Meeting at agreed upon location within 30 calendar days of contract award. The purpose of the meeting shall be to review and gather available technical information applicable to the 2GES program and discuss the expected course of the program. The prime contractor shall submit an Agenda [CDRL A005] for the Kick-Off Meeting. The prime contractor shall consult the ACO and PM during development of the Kick-Off Meeting agenda to ensure Government concerns are addressed. The prime contractor shall provide presentation materials no later than 48 hours prior to the Kick-Off Meeting. The prime contractor shall provide the Minutes [CDRL A004] of the Kick-Off Meeting. The program kickoff meeting and preliminary design review shall be separate meetings held at locations mutually agreed upon by the contractor and the Government.

3.2.3.4.1 Technical Order Guidance Conference (TOGC)
The contractor shall conduct a TOGC with in 60 calendar days after contract award at Hill AFB. The contractor shall host two technical order In-Process Reviews (IPR) to be held at a time and place mutually agreed upon by the contractor and the Government within this conference.

3.2.4 Scheduling
The contractor shall prepare and maintain an Integrated Master Schedule (IMS) [CDRL A006] and an Integrated Master Plan (IMP) [CDRL A007].

3.2.5 System Engineering Management Plan (SEMP)
The prime contractor shall develop a comprehensive SEMP [CDRL A008]. The SEMP shall include specific entrance and exit criteria for all critical events listed on the IMS. The SEMP shall be reflected in the Integrated Master Plan [CDRL A007]. The prime contractor shall employ a disciplined and rigorous system engineering process conforming to EIA-632 during development and throughout production of the 2GES.

3.2.6 Configuration Management Plan
The prime contractor shall develop and maintain a Configuration Management Plan (CMP) [CDRL A009] in addition to a Configuration Audit Plan [CDRL A010] to control the configuration of 2GES, including the existence and disposition of non-conformances, throughout this effort. The plan shall follow the requirements of MIL-HDBK-61A and EIA-649-1. The plan shall also meet the requirements of 08-A10 DOC-010 A10 Aircraft Integrated Configuration Management and Data Management Plan. The CMP shall demonstrate how compatibility shall be achieved with the A-10 System Program Office (SPO) Team-center A-10 Data Exchange Specification.

3.2.7 Design Reviews

3.2.7.1 System Requirements Review (SRR)
The SRR shall be a multi-disciplined technical review convened at the contractor's facility for the formal review of the System Requirements and the contractor's system solution. The data presented in the review shall provide evidence that the contractor's system solutions consistent with the system technical requirements. The contractor shall capture and distribute Minutes [CDRL A004].

3.2.7.2 Preliminary Design Review (PDR)
The PDR shall be a multi-disciplined technical review convened by the USG and the contractor's team, subsequent to the SRR and the decomposition of the system's functional performance and interface definitions, to determine whether the hardware preliminary design is complete, and the program is ready to start detailed design. The contractor shall conduct a PDR at the contractor's facility after completion of all technical analysis and development of a preliminary design approach. The contractor shall capture and distribute Minutes [CDRL A004].

3.2.7.3 Critical Design Review (CDR)
The contractor shall conduct a Critical Design Review (CDR), at their facility for the formal review of the product's detailed design. Completion of the CDR confirms that the design Product Baseline, Item Detail Specifications, Material Specifications, and Process Specifications is ready for the commencement of formal system integration. The contractor shall review detailed design results and the Technical Data Package (TDP). The contractor shall capture and distribute Minutes [CDRL A004].

3.2.7.4 Test Readiness Review (TRR)
The TRR shall be a multi-disciplined technical review to assess the readiness of the system plans and test procedures and/or its subsystems to proceed into formal testing (e.g. qualification testing, EMI/EMC, and other subsystem test events). The contractor shall capture and distribute Minutes [CDRL A004].

3.2.8 Accident/Incident Report
The contractor shall submit an Accident/Incident Report [CDRL A011] during the course of execution should property damage or an injury occurs.

3.2.9 Programmatic Environmental Safety and Health Evaluation (PESHE) Plan
The contractor shall submit a PESHE [CDRL A049] detailing how they meet safe manufacturing and compliance with environmental regulations.

3.3 ENGINEERING REQUIREMENTS:

3.3.1 PLM Requirements
The contractor shall develop all systems and equipment compatible with the USAF two-level (organizational-level and depot-level) maintenance concept.

3.3.1.1 CDRLS
All data deliverables in this PWS shall be formatted for import into the A-10 Teamcenter environment using the "A-10 Product Lifecycle Management (PLM) Data Exchange Specification" 12-A10DOC-002.

3.3.1.2 Drawings and Models
Drawing deliverables shall also be formatted for import into Joint Engineering Data Management Information and Control System (JEDMICS) using the Ogden Air Logistics Complex, Engineering, "Digital Delivery Requirements and Metadata Instructions." All tasks requiring the updating or creating of 2-D drawings with or without 3-D CAD models shall be accomplished using one of the methodologies listed in "A-10 2-D drawing to 3-D Model Migration Specification" 13-A10DOC-001. Each task shall identify the specific methodology to be used along with any other requirements pertinent to the task. For updating, creating, and/or migrating 2-D drawings into Model Based Definitions (3D pdf files with imbedded models and part reports), one or more of the specifications listed below shall be required by each methodology to ensure a complete and accurate engineering TDP:

- A-10 3-D Modeling Specification 11-A10DOC-004
- A-10 3-D Model Validation Specification 12-A10DOC-009

- A-10 NX Drafting Specification 11-A10DOC-005 (for CAD generated drawings/sheets)
- A-10 Drawing Practice 08-A10DOC-001

In addition, Part Reports shall be delivered as 3D pdf files with imbedded

3.3.2 Requirements Definition
The contractor shall conduct the Kickoff Meeting and Guidance Conference to discuss program planning, technical requirements, Technical Data Package and logistics issues. The contractor shall capture and distribute Minutes [CDRL A004]. The contractor shall define requirements for the integration of the GFE LRUs into the A-10C. The contractor shall show requirements traceability to the Government PWS. The installation and operation of the GFE LRUs shall not adversely impact the normal operation of any other existing aircraft system or component.

3.3.2.1 The Contractor shall provide a Sub-System Specification (SSS) that specifies the requirements for the 2GES system and the methods to be used to ensure that each requirement has been met [CDRL A050].

3.3.3 Quality Assurance

3.3.3.1 Qualifications
Quality control processes are critical to providing consistent, conforming product, to minimizing non-conforming product, and to meeting delivery schedule requirements. Manufacturers shall be AS 9100 certified (or equivalent). The prime contractor shall demonstrate consistent supplier oversight, detection of non-conformances, communication of findings from subcontractor to prime contractor engineering and program management personnel, and communication of findings (along with the scope of the finding and proposed disposition) to the Government for disposition via QA Reporting [CDRL A012].

3.3.3.2 Quality Assurance Plan (QASP)
The prime contractor shall provide the Government a Quality Assurance Plan (QAP) [CDRL A013]. The QAP shall define the quality control processes used by the prime contractor and their suppliers to ensure 2GES meets TDP requirements including dimensional accuracy, material selection, process, and interface compliance. The QAP shall address how production escapes, non-conformances, and product quality defect reports are to be handled. The Government shall review and approve the QAP prior to the prime contractor producing first article parts.

3.3.3.3 Subcontractor/Partner Quality Requirements
The prime contractor is responsible for ensuring that all subcontractors, partners, and sub-tier subcontractors/partners meet the prime contractor's quality system requirements. This includes the ability to provide transparency of non-conformances from the point of discovery to the point of delivery to the Government. The prime contractor shall demonstrate subcontractor/partners compliance with the prime contractor's quality system requirements to the Government. The means of verification shall include audits of the quality system compliance as well as physical on-site audits of the subcontractor/partner's processes, procedures, records, facilities, etc., as needed.

3.3.3.4 Independent Government Audit
The prime contractor, subcontractors, and partners are subject to independent Government or Government directed audits at any time to assure quality procedures and processes are followed.

3.3.3.5 Critical Safety Items (CSI) Requirements
Subcontractors and prime contractor shall adhere to Air Force Instruction (AFI) 20-106 "Management of Aviation Critical Safety Items."

3.3.4 Engineering Integration

3.3.4.1 Safety Assessment Report (SAR)
The contractor shall update the Safety Assessment Report [CDRL A014], limited to the scope of 2GES modification, if there are changes identified as a result of this task. The update shall cover electrical, mechanical, and human interfaces affected by the modification.

3.3.4.2 Site Survey
Deleted paragraph requirements, CDRL A015 and CDRL A016 changed to reserved.

3.3.4.3 Integration Analysis
Requirement deleted [CDRL A017] changed to reserved.

3.3.4.4 Stress Analysis [CDRL A021]
The contractor shall perform and document a complete stress analysis on any mechanical modifications to the airframe structure as a result of this installation.
3.3.4.5 Weight and Balance Analysis [CDRL A023]
The contractor shall provide the masses and locations of the 2GES system. The contractor shall perform a weight and balance analysis to track weight and center-of-gravity of the components associated with this task. The contractor shall verify that this modification shall not result in deleterious effects to the aircraft performance and safety. The contractor shall perform an initial weight and balance analysis prior to trial-kit installation. The analysis shall identify any impact of changes to the original design and update aircraft weight and balance data.

3.3.4.6 Cybersecurity Analysis [CDRL A024]
The contractor shall implement a Cybersecurity (also referenced as Information Assurance) program and provide mission criticality analysis, vulnerability assessments, risk assessments, identification and countermeasures implementation, and technical support to assist the Government in complying with the instructions and guidance in the AFI 17-101, Risk Management Framework (RMF) for Air Force Information Technology; AFLCMC Cybersecurity Risk Management Framework (RMF) Standard Process 2.0, in particular, Attachment 2 Risk Management. The contractor shall define their application of supply chain risk management best practices, applied as appropriate to the design and development of the system and conduct a Critical Program Information Analysis. DEMIL Code D; USML or CCL Military items -DEMIL required. Destroy items and components to prevent restoration or repair to a usable condition.

3.3.4.7 Airworthiness Certification
The contractor shall prepare a Modification Airworthiness Certification Criteria Report (MACC) [CDRL A025] for all the impacted airworthiness criteria as agreed with the Government. The contractor shall prepare an Assessment [CDRL A026] of all the airworthiness criteria impacted by this modification using MIL-HDBK-516C as a guide.

3.3.4.8 The Contractor shall provide an Interface Control Document (ICD) that defines the 2GES electrical and mechanical interfaces that include a detailed system interface description, an electrical block diagram, new connector definitions, an Electrical Interface Control Table, wiring diagrams, and orthogonal mechanical views including mounting hole data [CDRL A051].

3.3.5 System Modification

3.3.5.1 Architecture Development
The Contractor shall provide data to allow the309 SMXG to employ an Interface Control Document (ICD) and other interface data. This will allow the 309 SMXG to integrate the contractor's product successfully into the A-10C software architecture. A systems requirements review shall be conducted with the 309 SMXG during scheduled IPRs to review contractual requirements and verification methods. The Gov. retains final sign-off authority.

3.3.5.2 Technical Data Package (TDP)
The contractor shall develop/produce/maintain a Technical Data Package (TDP) that accurately depicts the final installation. The TDP shall provide the design, engineering, manufacturing, testing, and quality-assurance information for integration of Line Replaceable Units (LRUs) (Group B items) and aircraft interface components (Group A items). The contractor shall include engineering data to enable replication of Group A and Group B integration without additional non-recurring engineering effort.

3.3.5.2.1 Product drawings and associated lists
TDP shall include, but is not limited to, all Engineering Drawings, Associated Lists, and Specification Trees [CDRL A027]. The TDP shall specify a kit or kits appropriate for the configuration of A-10C identified in the survey of Section "3.3.4.2. Site Survey."

3.3.5.2.2 TCTOs
The TDP shall include a Time Compliance Technical Order (TCTO) [CDRL A028] IAW MIL-STD-38804 for the integration of the 2GES solution to include mounting and wiring. Separate TCTOs shall be written to cover aircraft, LHCBP, NMRB and Pylon station 2 and 10 TCTOs [CDRL A028].

3.3.5.2.3 EOs
The TDP shall include Engineering Orders (EOs) [CDRL A029] for all applicable A-10 drawings in the Joint Engineering Data Management Information and Control System (JEDMICS). The contractor shall provide 2D drawings accompanied by 3D drawings/models of the mechanical and structural interfaces of the 2GES with the aircraft, and of exterior mold lines of LRUs and bracketry. All 2D and 3D drawings shall be in compliance with, ASME Y14.100, Engineering Drawing Practices and the A-10 System Program Office documents listed in Section "2.1 Referenced Documents." For engineering product definition data not created using Government funding, source control drawings shall be required.

3.3.5.3 Sustainment Data
The contractor shall design, produce, maintain and deliver T.O. Source Data [CDRL A031] that accurately depicts the final product. The contractor shall coordinate with the Government for wire, harness, drawing and RDI numbers. Source data shall represent the approved, tested, and accepted configuration of the defined delivered item(s). Source data shall include, but is not limited to, engineering drawings, electrical schematics, theory of operation, and procedures for installation, maintenance, troubleshooting, and removal of the 2GES. The contractor shall support T.O. development throughout the in-process reviews and T.O. verification. Support includes attendance at government T.O. In Process Reviews conducted by both pilots and maintainers and T.O. verification and validation events prior to the contractor's product going to Operational Test.

3.3.5.4 T-2 Modification/Flight Clearance
The contractor shall provide a complete T-2 modification Package [CDRL A032] and support efforts to obtain an aircraft flight clearance. The contractor shall base the T-2 modification efforts on AFI 63-1201, *Implementing Operational Safety, Suitability and Effectiveness (OSS&E) and Life Cycle Systems Engineering (LCSE)* and comply with the procedures defined in the A-10 System Program Office Operating Instruction 63-02, *Configuration Change Proposal Development and Approval*. The contractor provided data shall include, but is not limited to, hardware wiring requirements, engineering data and drawings for hardware integration, environmental qualification reports, and A-10 specific shock and vibration qualification in accordance with SA220R0307

3.3.5.5 Provisioning
The contractor shall identify and recommend logical spare/repair parts sufficient to meet system/equipment operation and supportability in accordance with the AFI 63-101/20-101.

The contractor shall define the Provisioning Parts List (PPL) [CDRL A033] of new and modified items

Identify the end item, component or assembly, and all support items which can be disassembled, reassembled, or replaced, and when combined, constitute the end item component or assembly.

PPL includes: Items such as parts, materials, connecting cabling, piping and fittings required for the operation and maintenance of the end item, component, or assembly.

- Range and quantity of support items required to maintain the end item for an initial period of service.
- All repairable contractor off-the-shelf (COTS) items
- All Government Furnished Equipment (GFE) shall be listed as one line entries with no breakdown
- Items of common and special design hardware such as nuts, bolts, screws, keys, washers and fittings
- Electrical and electronic parts such as connectors, contacts, resistors, capacitors, transistors and diodes

3.3.6 Test

3.3.6.1 Prototype Fit Check
The contractor shall conduct a prototype fit check at a location determined by the Government to verify the fit of the 2GES components. The prototype fit check shall take no more than three days to complete. If the Hill AFB A-10

Engineering Development Stand (EDS) is desired to meet this need, coordination is required with either the A-10 SPO Software Branch or the 309 SMXG A-10 Program.

3.3.6.2 Test Support
The contractor shall participate in the Trial Vehicle Installs (TVIs). The contractor shall provide on-site engineering, integration, and test support for the Systems Integration Laboratory (SIL) test accomplished at Hill AFB, UT if requested by 309 SMXG. The contractor shall support the Government designated Responsible Test Organization (RTO) for the Qualification Test & Evaluation ground and flight tests to verify system operation IAW the SSS. The contractor shall support flight tests as identified.

3.3.6.3 Hardware Testing
The contractor shall generate Hardware Test Procedures [CDRL A036], Hardware Test Description [CDRL A037], and Hardware Test Report [CDRL A038]. The contractor shall test the hardware to MIL-STD-810G. The test data, analysis and the results of any simulations shall be available for inspection and review by the Government.
The test data, analysis and the results of any simulations shall be available for inspection and review by the Government. The contractor may perform verification through analysis with Government approval. The Government reserves the right to require verification through test if Government deems analysis insufficient.

3.3.6.3.1 Electrical Load
The contractor shall perform only two (2) system-level MIL-STD-704A power tests for this task order. The contractor shall run LDC105 and LDC302 in accordance with MIL-HDBK-704A and provide the results in an Electric Load Testing Report [CDRL A041]. The contractor shall ensure the dual system loads on existing inputs will not exceed the capability of existing system signals supplied by the aircraft.

3.3.6.4 Trial Vehicle Install (TVI)
The contractor shall procure/manufacture, assemble, integrate, and test first 3 trial-install kits, to be followed by 2 kit-proofs/TCTO verifications. The contractor shall note and 'redline' any affected drawing and part lists in the TDP that require changes as a result of information learned from these installations. The contractor shall photograph the installation as required to enhance technical manuals [CDRL A042]. Following the TVIs, using the contractor's Test Plan, the contractor shall perform operational checkout of the switch and report all trial installation kit deficiencies [CDRL A043]. The contractor shall ensure Line Replaceable Units (LRUs) are pre-loaded with test OFP for installation. The 309 SMXG will continue with the system test when the switch test is complete and troubleshoot if necessary.

3.3.6.5 Acceptance Test Plans and Procedures
The contractor shall prepare Acceptance Test Procedures for prototype and limited production, hardware [CDRL A044], kit testing and for both ground and flight if necessary. The contractor shall include the test procedure for Pre-Mod and Post-Mod operational ground-tests and a Post-Mod flight test. The contractor shall cite existing operational checks contained in the appropriate Maintenance Technical Orders to verify proper installation and functionality of the system.

3.3.6.5.1 Requirements Traceability
The contractor shall provide a Specifications Requirement Verification Table [CDRL A045] which identifies the requirement and the verification method(s) to be used. Each verification method selected by the contractor will be approved by the Government. Any support needed from 309 SMXG i.e. the SIL will need to be requested/coordinated in a timely manner to prevent usage conflicts; OFP has priority in usage. Options for verification can include:

- D Demonstration: Defined as a non-instrumented test where success is determined by observation alone. Included in this category are tests that require simple quantitative measurements of dimensions, time to perform tasks, etc.
- T Test: Defined as the verification, by a thorough exercising of the applicable element under appropriate conditions in accordance with test procedures, that a specified requirement has been met.
- A Analysis: Defined as the verification (through the technical evaluation of equations, charts, reduced data and/or representative data) that a specified requirement has been met.

- I Inspection: Defined as a visual verification that the equipment as manufactured conforms to the documentation to which it was designed
- N/A Not applicable

3.3.7 Production

3.3.7.1 Kit-Proof/Kit Fabrication
The contractor shall procure/manufacture and assemble kits and the design approved at CDR. On acceptance of First Article and consent of the ACO, the contractor shall proceed with building the remaining kits.

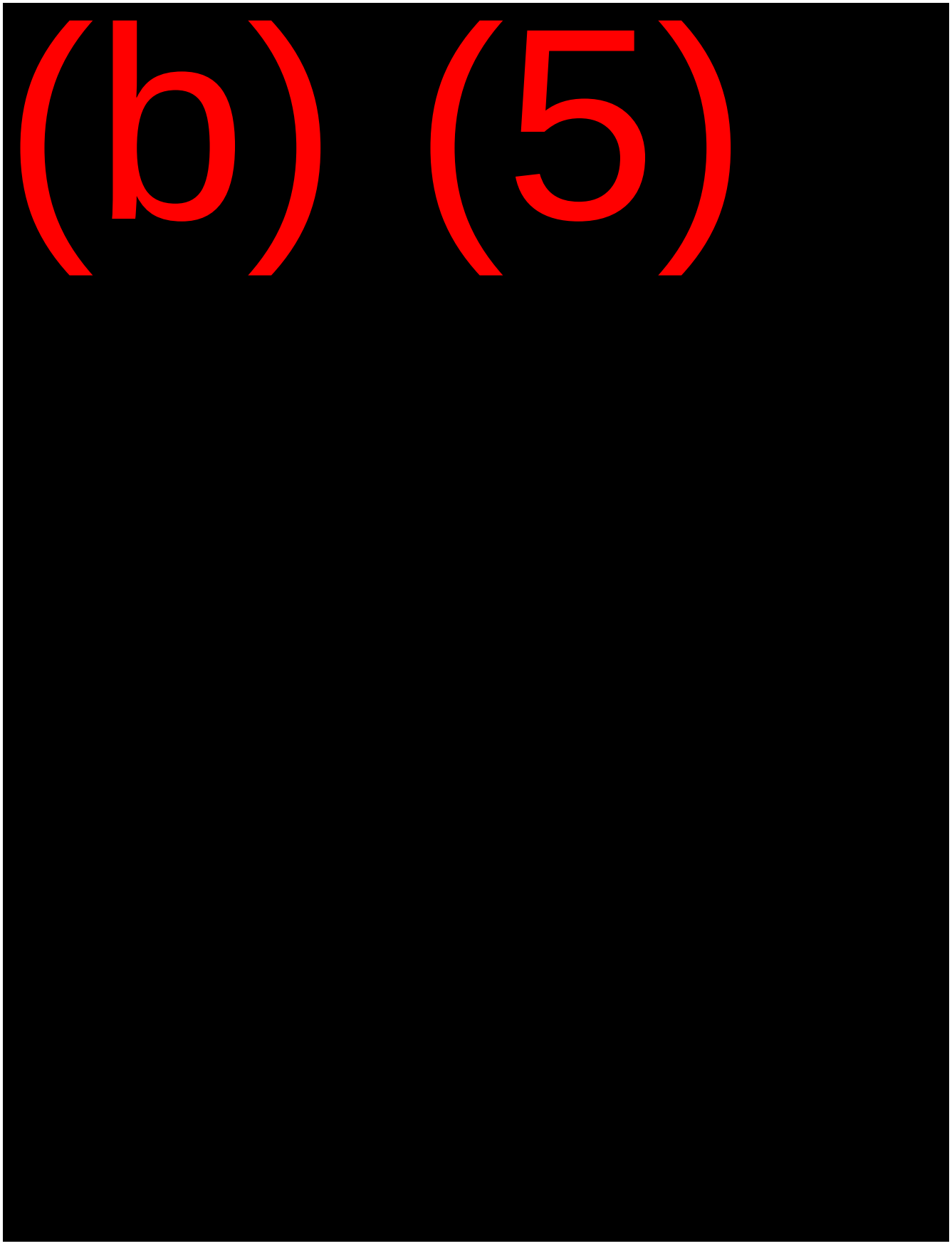
3.3.7.2 Nameplates and Product Marking
The Nameplates and Product Marking shall be obtained from the OEM. The modified nameplate shall be marked in accordance with MIL-STD-130N. Sections 4 and 5 of MIL-STD-130N provide specific marking requirements. Special consideration should be given to Section 4.3 concerning permanency of product marking. The minimum information required in the Item Unique Identification (IUID) is listed below. The information in items 1-4 shall be contained in human-readable linear symbols and machine-readable IUID Data Matrix. Item 5 shall be contained in human-readable linear symbols.

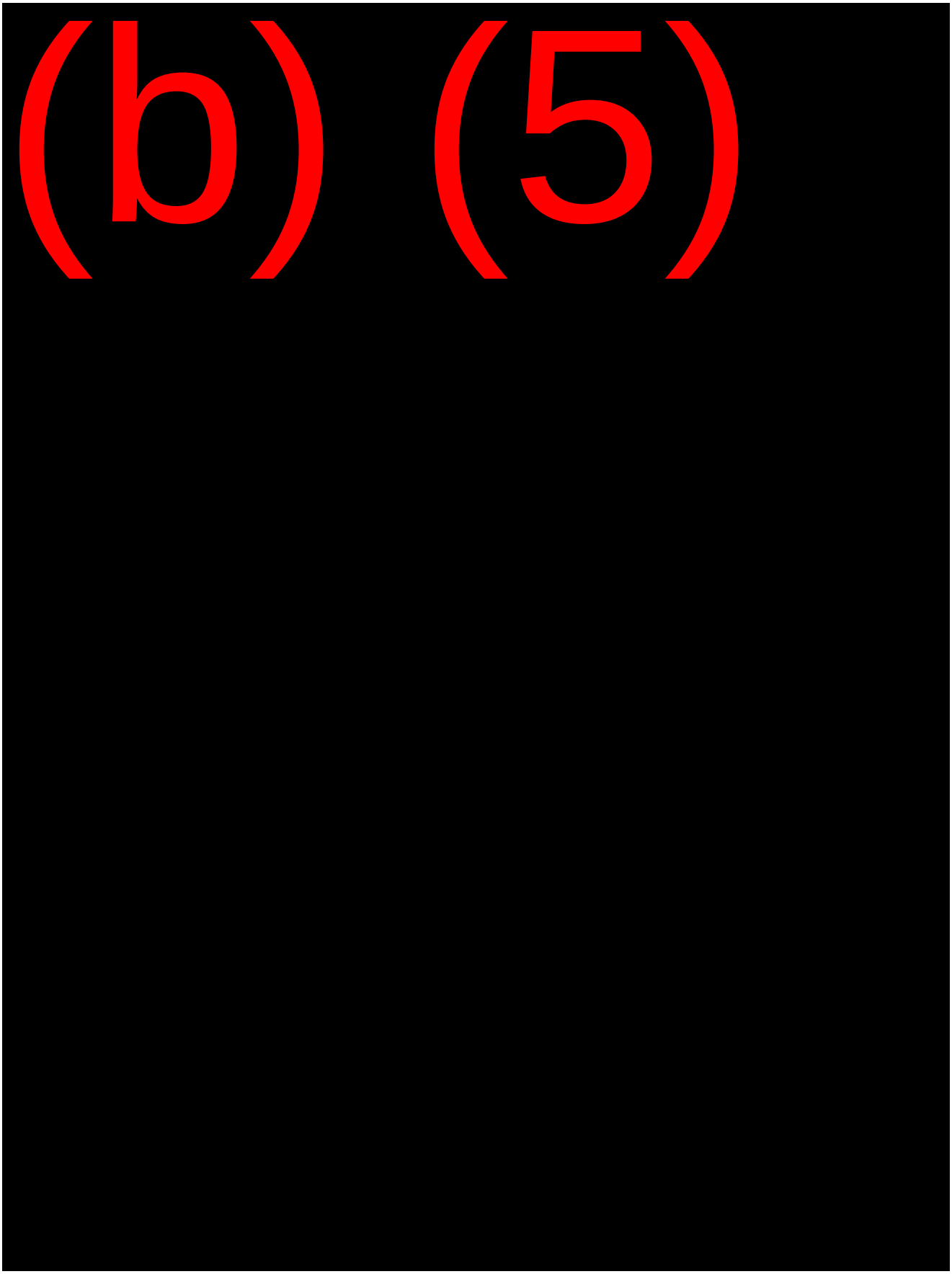
- Manufacturer (or supplier) Enterprise Identifier (EID)
- Part or Identifying Number (PIN)
- Serial Number
- National Stock Number (NSN)
- Part Name and Nomenclature

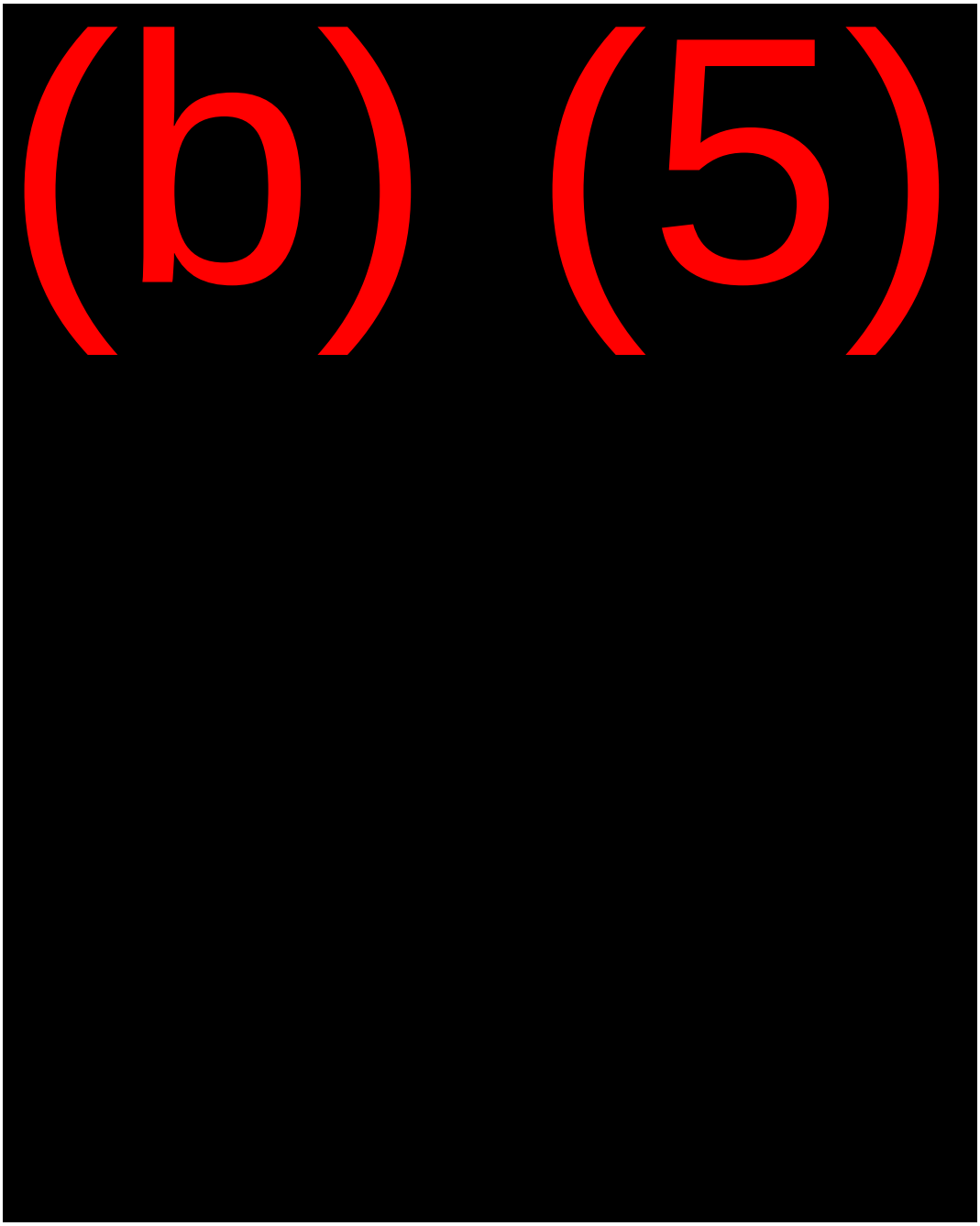
3.3.7.3 Functional Configuration Audit
The prime contractor shall conduct a Functional Configuration Audit (FCA) with the Government IAW FCA plan and provide an FCA Summary Report [CDRL A046]. Corrective action and an implementation plan for non-conformances identified during the FCA shall be agreed upon. The Government shall approve, or conditionally approve, the results of the FCA prior to accepting the first 2GES (First Article Exhibit). Full approval of the FCA shall be required prior to final LRIP acceptance (DD250).

3.3.7.4 Physical Configuration Audit
The prime contractor shall conduct Physical Configuration Audits (PCA) prior to delivery of the first 2GES and provide a PCA Summary Report [CDRL A047]. The prime contractor shall demonstrate to the Government the configuration of the 2GES, as built, matches the TDP. Corrective action and an implementation plan for non-conformances identified during the PCA shall be agreed upon and approved by the Government. The Government shall approve, or conditionally approve, the results of the PCA prior to accepting the 2GES (First Article Exhibit). Full approval of the PCA shall be required prior to final LRIP acceptance (DD250).

3.3.7.5 Packaging, Handling, Storage and Transportation
The contractor shall perform packaging in accordance with: MIL-STD-2073-1E w/Change 3, dated 20 November 2018, Standard Practice for Military Packaging and MIL-STD-129R w/Change 1, dated 24 May 2018, Military Marking for Shipment and Storage.


(b) (5)


(b) (5)



3.5 PERIOD OF PERFORMANCE
The period of performance shall be for a Period consisting of an Integration Phase, Production Phase, and Installation Phase. The term of the contract shall not exceed a total of 60 months.

The period of performance start date will be determined when the contract is awarded.

3.6 PROGRAM SUMMARY
The contractor shall provide a Program Summary [CDRL A048] to all work accomplished under this PWS, including significant technical accomplishments, problems encountered, solutions implemented, recommendations for improvement, and a comparison of planned schedules and costs with final performance.

CONTRACT DATA REQUIREMENTS LIST (CDRL)

Data submittals resulting from this proposal will be delivered in accordance with the following CDRL items; contractor format is acceptable. However, individual task/delivery orders may prescribe data items not listed

here or require additional information to conform to Govt requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item. All CDRLs are "government approval required" unless otherwise negotiated at the task/delivery order.

Sequence	Data Item Designator (DID)	Title
A001	DI-MGMT-80441C	Government Property Inventory Report
A003	DI-ILSS-80368A	Status Report
A004	DI-ADMIN-81505	Report, Record of Meeting/Minutes
A005	DI-ADMN-81249B	Conference Agenda
A006	DI-MGMT-81861A	Integrated Program Management Report (IPMR)
A007	DI-MGMT-81737	Implementation Plan
A008	DI-SESS-81785A	Systems Engineering Management Plan (SEMP)
A009	DI-CMAN-80858C	Supplier's Configuration Management Plan
A010	DI-SESS-81646B	Configuration Audit Plan
A011	DI-MGMT-82188	Accident Incident Report
A012	DI-QCIC-81187	Quality Assessment Report
A013	DI-SESS-80789A	Quality Assurance Provisions (QAP)
A014	DI-SAFT-80102C	Safety Assessment Report (SAR)
A015	DI-MISC-81579	Deleted Reserved
A016	DI-MISC-82104	Deleted Reserved
A017	DI-ATTS-80281A	Deleted Reserved
A021	MIL-A-8870C	Airplane Strength and Rigidity Vibration, Flutter, and Divergence
A023	DI-MGMT-81501A	Weight and Balance Report for Aircraft
A024	DI-MGMT-82191	Cybersecurity Vulnerability Report
A025	DI-SESS-81766	Airworthiness Specification
A026	DI-SESS-81768	Airworthiness Certification Criteria Report
A027	DI-SESS-81000E	Product Drawings/Models and Associated Lists
A028	DI-MGMT-80479	Time Compliance Technical Order (TCTO) Status Report
A029	DI-SESS-80776A	Technical Data Package
A030	DI-SESS-81121	Deleted Reserved
A031	TM-08-01N	Technical Manual Contract Requirements, TMCR
A032	DI-MISC-80508B	Technical Report - Study/Services
A033	DI-SESS-81715	Provisioning Parts List (PPLs)
A036	DI-ATTS-80282B	Test Program Set (TPS) and Operational Test Program Set (OTPS) Acceptance Test Procedures (ATPs)
A037	DI-NDTI-80566	Test Plan
A038	DI-ATTS-80281A	Test Program Set (TPS) Integration Logbook
A039	DI-ENVR-81014	Deleted Reserved
A040	DI-NDTI-80603A	Deleted Reserved
A041	MIL-STD-704A	Electric, Power, Aircraft, Characteristics and Utilization of
A042	DI-MISC-81579	Digital Imaging
A043	DI-NDTI-80809B	Test/Inspection Report
A044	DI-NDTI-80603A	Test Procedure
A045	DI-MISC-81283	Specification Requirement Verification Matrix
A046	DI-SESS-81646B	Configuration Audit Plan (Calls out FCA)
A047	DI-SESS-81646B	Configuration Audit Plan (Calls out PCA)
A048	DI-MISC-80508B	Technical Report–Study/Services
A049	DI-ENVR-81840	Programmatic Environmental Safety and Health Evaluation Plan
A050	DI-IPSC-81431A	System / Subsystem Specification (SSS)
A051	DI-SESS-81248B	Interface Control Document (ICD)

4.1 Distribution List: The contractor shall deliver electronic copies to XXXX via XXXX in Microsoft Office products or in Adobe PDF format IAW XXXX. The contractor shall deliver electronic copies via e-mail in

Microsoft Office products or in Adobe PDF format to personnel as indicated. The subject block shall contain the contract number, delivery order number, CET number, CDRL title, and date. If this task involves classified data, the contractor shall deliver classified data in an appropriate manner to only those recipients specifically indicated in the distribution list below. For all other recipients, the contractor shall send only a cover letter in lieu of the classified data. The contractor shall ensure the security of unclassified DoD information on non-DoD information systems in accordance with DoDI 8582.01, 6 Jun 2012.

Code	Copies (regular/reproducible/electronic)	Address
AFLCMC/WWAP	All deliverables: 0/0/1 If this task involves classified data, the contractor shall deliver classified data in an appropriate manner to this recipient. The contractor shall ensure the security of unclassified DoD information on non-DoD information systems IAW DoDI 8582.01, 6 Jun 2012.	AFLCMC/WWAP Attn: Hill Air Force Base, UT 84056 Email:
PCO	All deliverables: 0/0/1 If this task involves classified data, the contractor shall NOT deliver classified data to this recipient. Deliver only cover letters in lieu of classified data. The contractor shall ensure the security of unclassified DoD information on non-DoD information systems in accordance with DoDI 8582.01, 6 Jun 2012.	AFLCMC/WWAK Contracting Attn:
ACO (TBD)	Monthly Status Report: 0/0/1 Meeting Minutes: 0/0/1 Final Report: 0/0/1 Master Government Property List of GFP, GFE, GFM and Contractor Acquired Property: 0/0/1 If this task involves classified data, the contractor shall NOT deliver classified data to this recipient. Deliver only cover letters in lieu of classified data. The contractor shall ensure the security of unclassified DoD information on non-DoD information systems in accordance with DoDI 8582.01, 6 Jun 2012.	AFLCMC/ WWAK Contracting Attn:

5.0 ENGINEERING TECHNICAL POINTS OF CONTACT:

Title: Name: Voice: E-Mail: Title: Name: Voice: Email: Title: Name: Voice: E-Mail:	Client Point of Contact: PM Office Symbol: AFLCMC/WWAP Voice: (801) E-Mail: Resource Manager (RM) Point of Contact: FM Office Symbol: AFLCMC/WWAF Voice: (801) E-Mail:

Attachment A

VGH wire removal
PTO/PAMB harness removal
ETTR harness shortening

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F40	3211P1	A	W1106-058(20)	65	2413GD8		F40	REMOVE TERMINAL LUG
F40	3211P1	B	W1106-237(20)	81	4613TB1-4	D	F40	
F40	3211P1	N	W1106-238(20)	81	4613TB1-4	C	F40	
F40	3211P1	C	W1106-239(20)	81	4613TB1-4	B	F40	
F40	3211P1	H	W1106-240(20)	81	4613TB1-7	G	F40	
F40	3211P1	L	W1106-241(20)	81	4613TB1-3	E	F40	
F40	3211P1	M	W1106-242(20)	81	4613TB1-3	D	F40	
F40	3211P1	P	W1106-243(20)	81	4613TB1-3	C	F40	
F40	3211P1	R	W1106-244(20)	81	4613TB1-3	B	F40	
F40	SH/244		W1106-244SH		4613TB1-3	A	F40	
F19	2713J12	N*	W1341-101AU	223	4613TB1-1	B	F40	
F19	2713J12	P*	W1341-101BL	223	4613TB1-1	C	F40	
F19	SH/101		W1341-101SH		2713J12	K*	F19	
F40	SH/101		W1341-101SH		4613TB1-1	A	F40	
F19	2713J12	Q*	W1341-101WH	223	4613TB1-1	D	F40	

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F40	2713P22	V	W1341-104(22)	83	4613TB1-2	B	F40	
F40	SH/104		W1341-104SH		4613TB1-2	A	F40	
F75	2413J6	R	W1343-096(22)	106	4613TB1-7	D	F40	
F75	2413J6	I*	W1343-109(20)	106	4613TB1-7	B	F40	
F21/F23 BHD	7313J1	E*	W1343-225BL	158	4613TB1-8	E	F40	
F21/F23 BHD	SH/225		W1343-225SH		SPLC 22		F40	REMOVE SPLICE
F21/F23 BHD	SH/225		W1343-225SH		SH/226		F40	
F21/F23 BHD	7313J1	D*	W1343-225WH	158	4613TB1-8	D	F40	
F21/F23 BHD	7313J1	V	W1343-226BL	158	4613TB1-8	C	F40	
F21/F23 BHD	SH/226		W1343-226SH		4613TB1-8	A	F40	
F21/F23 BHD	SH/226		W1343-226SH		7313J1	B	F40	
F21/F23 BHD	SH/226		W1343-226SH		SPLC 22		F40	REMOVE SPLICE
F21/F23 BHD	7313J1	U	W1343-226WH	158	4613TB1-8	B	F40	
F40	9413P48	M	W1350-193(20)	74	4613TB1-5	D	F40	
F40	SH/193		W1350-193SH		4613TB1-5	E	F40	
F40	SH/193		W1350-193SH		9413P48	L	F40	
F10	4613P7	A	W1351-001BL	99	4613P8	4	F40	REMOVE AND DISCARD 4613P8, 4613P7
F10	SH/001		W1351-001SH		SPLC 12		F40	REMOVE AND DISCARD 4613P8
F10	SH/001		W1351-001SH		SPLC 10		F40	REMOVE AND DISCARD 4613P8
F10	4613P7	B	W1351-001WH	99	4613P8	6	F40	REMOVE AND DISCARD 4613P8, 4613P7

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F10	4613P7	C	W1351-002BL	99	4613P8	5	F40	REMOVE AND DISCARD 4613P8
F10	SH/002		W1351-002SH		SPLC 12		F40	REMOVE AND DISCARD 4613P8
F10	SH/002		W1351-002SH		SPLC 10		F40	REMOVE AND DISCARD 4613P8
F10	4613P7	D	W1351-002WH	99	4613P8	7	F40	REMOVE AND DISCARD 4613P8
F40	4613P8	2	W1351-003(20)	53	2413GD10		F40	REMOVE AND DISCARD 4613P8
F40	4613P8	1	W1351-004(22)	48	SPLC 1		F40	REMOVE AND DISCARD 4613P8 AND SPLICE 1
F10	4613P7	E	W1351-005BL	159	4613P9	5	F44	
F10	SH/005		W1351-005SH		SPLC 13		F10	
F44	SH/005		W1351-005SH		SPLC 10		F44	
F10	4613P7	F	W1351-005WH	159	4613P9	4	F44	
F10	4613P7	G	W1351-006BL	159	4613P9	6	F44	
F10	SH/006		W1351-006SH		SPLC 13		F10	
F44	SH/006		W1351-006SH		SPLC 10		F44	
F10	4613P7	H	W1351-006WH	159	4613P9	12	F44	
F10	4613P7	J	W1351-007BL	159	4613P9	7	F44	
F10	SH/007		W1351-007SH		SPLC 13		F10	
F44	SH/007		W1351-007SH		4613P9	1	F44	REMOVE CONNECTOR 4613P9
F44	SH/007		W1351-007SH		SPLC 11		F44	
F10	4613P7	K	W1351-007WH	159	4613P9	13	F44	
F44	4613P10	B	W1351-008(22)	117	SPLC 1		F44	REMOVE SPLICE
F44	4613P10	B	W1351-008(22)	105	SPLC 1		F44	REMOVE SPLICE
F44	SPLC 2		W1351-009(20)	51	2413GD12		F44	REMOVE SPLICE AND TERMINAL LUG
F44	4613P9	2	W1351-010(22)	85	SPLC 1		F44	REMOVE SPLICE

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F44	4613P10	C	W1351-011BL	162	4613P17	A	F10	
F10	SH/011		W1351-011SH		SPLC (18)		F10	REMOVE SPLICE
F44	SH/011		W1351-011SH		4613P10	G	F44	
F44	4613P10	D	W1351-011WH	150	4613P17	B	F10	
F10	4613P7	N	W1351-012BL	187	4613P13	C	F44	
F10	SH/012		W1351-012SH		SPLC (11)		F10	
F44	SH/012		W1351-012SH		4613P13	G	F44	
F10	4613P7	P	W1351-012WH	187	4613P13	D	F44	
F44	4613P10	A	W1351-013(20)	77	2413GD12		F44	REMOVE CONNECTOR 4613P10
F44	4613P13	A	W1351-014(20)	70	2413GD12		F44	
F40	SPLC 1		W1351-015(22)	22	4613TB1-3	K	F40	REMOVE SPLICE
F10	4613P7	X	W1351-016AU	128	4613TB1-1	G	F40	
F10	4613P7	V	W1351-016BL	128	4613TB1-1	H	F40	
F40	SH/016		W1351-016SH		4613TB1-1	F	F40	
F10	SH/016		W1351-016SH		SPLC 10		F10	REMOVE SPLICE
F40	SPLC 3		W1351-016WH	128	4613TB1-1	J	F40	REMOVE SPLICE
F10	4613P12	G	W1351-022BL	146	4613P14	F	F44	
F10	SH/022		W1351-022SH		4613P14	J	F44	
F10	SH/022		W1351-022SH		SPLC 16		F44	REMOVE SPLICE
F10	SH/022		W1351-022SH		SPLC 15		F44	REMOVE SPLICE
F10	4613P12	H	W1351-022WH	146	4613P14	A	F44	
F10	4613P12	E	W1351-023BL	112	SPLC 4		F44	REMOVE SPLICE
F10	SH/023		W1351-023SH		SPLC 17		F44	REMOVE SPLICE
F10	SH/023		W1351-023SH		SPLC 15		F44	REMOVE SPLICE

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F10	SH/023		W1351-023SH		SH/026		F44	
F10	SH/023		W1351-023SH		SH/022		F44	
F10	4613P12	F	W1351-023WH	112	SPLC 5		F44	REMOVE SPLICE
F44	4613P14	B	W1351-024BL	76	SPLC 4		F44	REMOVE SPLICE
F44	SH/024		W1351-024SH		SPLC 16		F44	REMOVE SPLICE
F44	SH/024		W1351-024SH		SPLC 17		F44	REMOVE SPLICE
F44	SH/024		W1351-024SH		SH/022		F44	
F44	SH/024		W1351-024SH		SH/025		F44	
F44	4613P14	K	W1351-024WH	76	SPLC 5		F44	REMOVE SPLICE
F44	SPLC 4		W1351-025BL	23	4613TB1-8	K	F40	
F44	SH/025		W1351-025SH		SPLC 17		F44	REMOVE SPLICE
F44	SH/025		W1351-025SH		SH/023		F44	
F44	SPLC 5		W1351-025WH	23	4613TB1-8	J	F40	
F44	4613P14	H	W1351-026BL	89	4613TB1-8	H	F40	
F44	SH/026		W1351-026SH		4613TB1-8	F	F40	
F44	SH/026		W1351-026SH		SPLC 16		F44	REMOVE SPLICE
F44	SH/026		W1351-026SH		SH/024		F44	
F44	4613P14	G	W1351-026WH	89	4613TB1-8	G	F40	REMOVE CONNECTOR 4613P14
F44	4613P13	B	W1351-027(22)	117	SPLC 1		F40	REMOVE SPLICE AND CONNECTOR 4613P13
F42	SH/028		W1351-028SH		SH/0042		F42	REQUIRES TCTO 629 C/W; REMOVE SHLD JMPR BETWEEN W1360-0042 AND W1351-28 BY CUTTING AS CLOSE TO W1360-0042 AS POSSIBLE. RETAIN SHLD JMPR CONNECTION TO W1351-028 AND FOR REUSE.

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F42	SH/028		W1351-028SH		SH/0048		F42	REQUIRES TCTO 629 C/W; REESTABLISH SHIELD FOR W1351-028 BY CONNECTING SHIELD TO W1360-0048SH. MAY NEED TO UTILIZE NEW SOLDER SLEEVEON W1360-0048 (M83519/2-8)
F44	4613P9	10	W1351-029(22)	9	SPLC 2		F44	REMOVE SPLICE
F44	4613P14	D	W1351-030(20)	26	2413GD11		F44	REMOVE TERMINAL LUG
F44	4613P14	C	W1351-031(22)	89	4613TB1-4	H	F40	
F10	4613P12	L	W1351-032(22)	126	4613TB1-2	G	F40	
F40	SH/032		W1351-032SH		4613TB1-2	F	F40	
F10	SH/032		W1351-032SH		SPLC 15		F10	
F10	SH/032		W1351-032SH		SH/033		F10	
F10	4613P12	J	W1351-033(22)	127	4613TB1-5	J	F40	
F40	SH/033		W1351-033SH		4613TB1-5	K	F40	
F10	SH/033		W1351-033SH		SPLC 15		F10	
F10	SH/033		W1351-033SH		SH/028		F10	
F10	4613P12	N	W1351-034(22)	127	4613TB1-3	G	F40	
F40	SH/034		W1351-034SH		4613TB1-3	F	F40	
F10	SH/034		W1351-034SH		SPLC 15		F10	
F10	SPLC 6		W1351-035(22)	18	4613P5	C	F10	
F10	SPLC 6		W1351-037(22)	18	4613TB1-3	H	F40	
F10	4613P5	A	W1351-039(22)	108	SPLC 7		F40	REMOVE SPLICE
F40	SPLC 7		W1351-040(22)	18	4613TB1-7	J	F40	

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F40	SPLC 7		W1351-041(22)	18	4613TB1-7	J	F40	
F10	4613P5	F	W1351-042(22)	130	4613TB1-4	J	F40	
F10	4613P5	G	W1351-043(22)	130	4613TB1-4	G	F40	
F10	4613P5	D	W1351-044(20)	47	2413GD19		F10	REMOVE TERMINAL LUG
F10	4613P5	E	W1351-045(20)	47	2413GD19		F10	REMOVE TERMINAL LUG
F10	4613P5	B	W1351-046(20)	47	2413GD44		F10	REMOVE TERMINAL LUG; REMOVE CONNECTOR 4613P5
F10	4613P7	W	W1351-048(22)	9	SPLC 3		F10	
F10	4613P7	Y	W1351-049(22)	9	SPLC 3		F10	
F10	4613P7	R	W1351-050AU	126	4613TB1-6	G	F40	
F10	4613P7	T	W1351-050BL	126	4613TB1-6	H	F40	
F40	SH/050		W1351-050SH		4613TB1-6	F	F40	
F10	SH/050		W1351-050SH		SPLC 11		F10	
F10	SPLC 8		W1351-050WH	126	4613TB1-6	J	F40	
F10	4613P7	S	W1351-051(22)	9	SPLC 8		F10	REMOVE SPLICE
F10	4613P7	U	W1351-052(22)	9	SPLC 8		F10	REMOVE SPLICE
F10	4613P7	Z	W1351-053AU	130	4613TB1-9	H	F40	
F10	4613P7	BB	W1351-053BL	130	4613TB1-9	G	F40	
F40	SH/053		W1351-053SH		4613TB1-9	F	F40	
F10	SH/053		W1351-053SH		SPLC 11		F10	
F10	SPLC 9		W1351-053WH	130	4613TB1-9	J	F40	

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F10	4613P7	AA	W1351-054(22)	9	SPLC 9		F10	
F10	4613P7	CC	W1351-055(22)	9	SPLC 9		F10	REMOVE CONNECTOR 4613P7
F10	4613P7	L	W1351-056BL(22)		4613SP4		F10	MAY HAVE BE BEEN DELETED BY DEPOT TEMS REWIRE
F10	4613SP4		W1351-056BL(22)		4613P17	D	F10	MAY HAVE BE BEEN DELETED BY DEPOT TEMS REWIRE
F10	SH/056		W1351-056SH		SPLC 18		F10	REMOVE SPLICE (MAY HAVE BE BEEN DELETED BY DEPOT TEMS REWIRE)
F10	SH/056		W1351-056SH		SPLC 11		F10	REMOVE SPLICE (MAY HAVE BE BEEN DELETED BY DEPOT TEMS REWIRE)
F10	4613P7	M	W1351-056WH(22)		4613SP3		F10	MAY HAVE BE BEEN DELETED BY DEPOT TEMS REWIRE
F10	4613SP3		W1351-056WH(22)		4613P17	C	F10	MAY HAVE BE BEEN DELETED BY DEPOT TEMS REWIRE
F10	4613P17	E	W1351-057(20)	20	2413GD84		F10	REMOVE 4613AT03 AND CONNECTOR 4613P17
F10	4613P7	HH	W1351-058(22)	9	SPLC 11		F10	
F42	SH/0013		W1360-0013SH	6	SH/0050		F42	REQUIRES TCTO 629 C/W; REMOVE SHLD JMPR BETWEEN W1360-0013 AND W1360-0050 BY CUTTING AS CLOSE TO W1360-0050 AS POSSIBLE.
F42	SH/0013		W1360-0013SH	6	SH/0048		F42	REQUIRES TCTO 629 C/W; REMOVE SHLD JMPR BETWEEN W1360-0013 AND W1360-0048 BY CUTTING AS CLOSE TO W1360-0013 AS POSSIBLE. RETAIN SHLD JMPR CONNECTION TO W1351-048 AND FOR REUSE.
F42	4613P20	111	W1360-0013WH	72	4613P25	D	F44	REQUIRES TCTO 629 C/W, REMOVE BOTH SHLD JMPRS FROM W1360-0013
F42	4613P20	100	W1360-0014BL	72	4613P25	C	F44	REQUIRES TCTO 629 C/W

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F42	SH/0042		W1360-0042SH	6	SH/0045		F42	REQUIRES TCTO 629 C/W, CUT JMPR WIRE BTWEEN W1360-0042 AND W1360-0045 FOR EASE OF WIRE REMOVAL
F40	4613P27	C	W1360-0042WH	120	4613P20	97	F42	REQUIRES TCTO 629 C/W
F40	4613P27	D	W1360-0043BL	120	4613P20SP1		F42	REQUIRES TCTO 629 C/W, REMOVE SPLICE
F42	4613P20	108	W1360-0043JMP	6	4613P20SP1		F42	REQUIRES TCTO 629 C/W, REMOVE SPLICE
F42	4613P20SP1		W1360-0044(22)N	60	4613TB2-1	K	F42	REQUIRES TCTO 629 C/W, REMOVE SPLICE
F42	SH/0045		W1360-0045SH		SH/0048		F42	REQUIRES TCTO 629 C/W; REMOVE SHLD JMPR BETWEEN W1360-0045 AND W1360-0048 BY CUTTING AS CLOSE TO W1360-0048 AS POSSIBLE.
F40	4613P26	C	W1360-0045WH	120	4613P20	107	F42	REQUIRES TCTO 629 C/W
F40	4613P26	D	W1360-0046BL	120	4613P20SP2		F42	REQUIRES TCTO 629 C/W, REMOVE SPLICE
F42	4613P20	122	W1360-0046JMP	6	4613P20SP2		F42	REQUIRES TCTO 629 C/W, REMOVE SPLICE
F42	4613P20SP2		W1360-0047(22)N	60	4613TB2-1	J	F42	REQUIRES TCTO 629 C/W, REMOVE SPLICE
F42	SH/0048		W1360-0048SH	6	SH/0013		F42	REQUIRES TCTO 629 C/W; REMOVE SHLD JMPR BETWEEN W1360-0013 AND W1360-0048 BY CUTTING AS CLOSE TO W1360-0013 AS POSSIBLE. RETAIN SHLD JMPR CONNECTION TO W1351-048 AND FOR REUSE.
F42	SH/0048		W1360-0048SH	6	SH/0045		F42	REQUIRES TCTO 629 C/W; REMOVE SHLD JMPR BETWEEN W1360-0048 AND W1360-0045 BY CUTTING AS CLOSE TO W1360-0048 AS POSSIBLE.

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F42	SH/0048		W1360-0048SH	6	SH/0050		F42	REQUIRES TCTO 629 C/W; REESTABLISH SHIELD FOR W1360-048 BY CONNECTING SHIELD TO W1360-0050SH. MAY NEED TO UTILIZE NEW SOLDER SLEEVE ON W1360-0050 (M83519/2-8)
F44	4613P25	A	W1360-0107(22)N	72	4613TB2-2	E	F42	REQUIRES TCTO 629 C/W
F40	4613P26	A	W1360-3038(22)	120	4613TB2-4	G	F42	REQUIRES TCTO 629 C/W
F40	4613P27	A	W1360-4038(22)	120	4613TB2-4	H	F42	REQUIRES TCTO 629 C/W
F44	4613P25	B	W1360-7038(22)	72	4613TB2-4	J	F42	REQUIRES TCTO 629 C/W, REMOVE TRU-106 ACCEL 4613AT04 (MAY ALSO BE IDENTIFIED AS 4613AT01)
F40	4613P26	B	W1360-7040(22)N	120	4613TB2-2	H	F42	REQUIRES TCTO 629 C/W; REMOVE CONNECTOR 4613P26
F40	4613P27	B	W1360-8040(22)N	120	4613TB2-2	J	F42	REQUIRES TCTO 629 C/W; REMOVE CONNECTOR 4613P27
F10	SPLC 10		W1325-034GN	98			F40	REQUIRES TCTO 611/614 TO BE C/W; WIRE CAPPED AND STOWED AT POINT AFTER F10/F40 FEEDTHRU; USE SAME CAPPING DEVICES AS TCTO 611/614
F10	SPLC 11		W1325-034WH	98			F40	REQUIRES TCTO 611/614 TO BE C/W; WIRE CAPPED AND STOWED AT POINT AFTER F10/F40 FEEDTHRU; USE SAME CAPPING DEVICES AS TCTO 611/614
F10			W1325-035(20)	48	4613SP38		F10	REQUIRES TCTO 611/614 TO BE C/W; REMOVE WIRE FROM 4613SP38.
F10			W1325-036(20)	42	2413GD17		F10	REQUIRES TCTO 611/614 TO BE C/W; WIRE AND LUG REMOVED COMPLETELY

LOCATION	TERMINATION END 1	CON PT.	WIRE NUMBER	LG	TERMINATION END 2	CON PT.	LOCATION	NOTES
F10	SPLC 4		W1326-032GN	94			F40	REQUIRES TCTO 611/614 TO BE C/W; WIRE CAPPED AND STOWED AT POINT AFTER F10/F40 FEEDTHRU; USE SAME CAPPING DEVICES AS TCTO 611/614
F10	SPLC 5		W1326-032WH	94			F40	REQUIRES TCTO 611/614 TO BE C/W; WIRE CAPPED AND STOWED AT POINT AFTER F10/F40 FEEDTHRU; USE SAME CAPPING DEVICES AS TCTO 611/614
F10			W1326-033(20)	44	4613SP38		F40	REQUIRES TCTO 611/614 TO BE C/W; REMOVE WIRE FROM 4613SP38. REACCOMPLISH SPLICE WITH WIRES W1316-025 AND W1316-128 USING M81824/1-2
F10			W1326-034(20)	52	2413GD17		F10	REQUIRES TCTO 600/611/614 TO BE C/W; WIRE AND LUG REMOVED COMPLETELY

REMOVED LRUs			
RDI	NOMENCLATUE	LOCATION	NOTE
4613AM01	STRAIN GAUGE AMPLIFIER	F44	IF INSTALLED
4613MP01	SBU-13A RATE GYRO	F44	IF INSTALLED
4613AT01	TRU-106/A1 NORM ACCELEROMETER	F44	MAY ALSO BE IDENTIFIED AS 4613AT04
4613AT02	TRU-107/A TRANSVERSE ACCELEROMETER	F44	IF INSTALLED
4613AT03	ADAPTOR NORM ACCEL SCALING FCTOR	F10	IF INSTALLED

REMOVED CONNECTORS	
4613P5	F10
4613P7	F10
4613P8	F40
4613P9	F44
4613P10	F44
4613P12	F10
4613P13	F44
4613P14	F44
4613P17	F10
4613P26	F40
4613P27	F40